Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Cancelled)

2. (Cancelled)

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. (Cancelled)

9. (Cancelled)

10. (Cancelled)

11. (Cancelled)

12. (Cancelled)

13. (Currently amended) Process of dynamic nuclear polarisation (DNP) of a mixture comprising a sample and a radical, the sample comprising NMR active nuclei, wherein the radical is generated in situ by photolysis of ~~from~~ a radical precursor, the radical precursor being a photolabile organic compound and wherein the radical decomposes to a non-radical species at temperatures from about 5 K to about 273 K.

14. (Currently amended) Process ~~Dynamic nuclear polarisation~~ according to claim 13 wherein the generation of the radical is carried out outside a ~~the~~ DNP magnet and the mixture is transferred into the DNP magnet after the radical generation.

15. (Currently amended) Process ~~Dynamic nuclear polarisation~~ according to claim 13 wherein the radical is generated by photolysis of a mixture frozen in liquid nitrogen, the mixture comprising the sample and a radical precursor being a photolabile organic compound or an organic compound comprising a photolabile group.

16. (Currently amended) Process ~~Dynamic nuclear polarisation~~ according to claim 15 wherein the radical is generated by freezing a mixture comprising the sample and a solvent in liquid nitrogen and irradiating the frozen mixture with high-energy radiation.

17. (Currently amended) Process ~~Dynamic nuclear polarisation~~ according to claim 13 wherein the mixture further comprises a solvent.

18. (Currently amended) Process ~~Dynamic nuclear polarisation~~ according to claim 13 wherein the mixture further comprises a glass forming compound.

19. (New) Process according to claim 13 wherein the radical precursor is a photolabile organic compound selected from the group consisting of R^1-X, R^1-S-R^2, R^1-Se-R^2, R^1-N=N-R^2, R^1-O-O-R^2, R^1-ONO, R^1-OX and R^1CO-O-O-COR^2, wherein R^1 and R^2 are identical or different straight chain or branched alkyl, aryl or aralkyl groups, and X is Cl, Br or I, or the radical precursor is an organic compound comprising a photolabile group, the photolabile group being selected from the group consisting of -R^1-X, - R^1-S-R^2, R^1-S-R^2-, - R^1-Se-R^2, R^1-Se-R^2-, - R^1-N=N-R^2, R^1-N=N-R^2-, - R^1-O-O-R^2, R^1-O-O-R^2-, -R^1-ONO, -R^1-OX, R^1CO-O-O-R^2-, -R^1CO-O-O-COR^2 and R^1CO-O-O-COR^2-, wherein R^1 and R^2 are identical or different straight chain or branched alkyl, aryl or aralkyl groups, and X is Cl, Br or I.

20. (New) Process according to claim 19 wherein R^1 and R^2 are identical.

21. (New) Process according to claim 19 wherein the radical precursor is selected from the group consisting of azobisisobutyronitrile, tert-butyl nitrite, tert-butyl hypochlorite, dibenzoylperoxide and di-tert-butylperoxide.

22. (New) Process according to claim 15 wherein the photolysis is carried out at wavelengths in the range of about 200 to 300 nm.

23. (New) Process according to claim 13 wherein the radical precursor is a solvent and the radical is prepared in situ using high-energy radiation.

24. (New) Process according to claim 13 wherein the radical precursor is selected from the group consisting of water, methanol, 1,2-propanediol, glycol and glycerol.

25. (New) Process according to claim 23 wherein the high-energy radiation is X-ray radiation or gamma radiation.